

What is Claimed is:

1. A liquid spray gun comprising  
a body assembly including a nozzle portion with an outlet end, said nozzle  
5 portion having a liquid passageway extending from an inlet end to an outlet end  
opening through the outlet end of the nozzle portion,  
said body assembly having a first air passageway extending from an inlet  
end to an outlet end at the outlet end of said nozzle portion, said outlet end of said  
first air passageway extending around said outlet end of said liquid outlet  
10 passageway and being shaped to direct air under greater than atmospheric pressure  
against liquid flowing out of the outlet end of the liquid outlet passageway to  
propel the liquid away from the outlet end of the nozzle portion while shaping the  
liquid into a generally conical stream about an axis,  
said body assembly including horns projecting past the outlet end of the  
15 nozzle on opposite sides of said axis,  
said body assembly having a second air passageway extending from an inlet  
end through portions of said horns to outlet passageways having outlet apertures  
spaced along said horns from the outlet end of the nozzle and facing opposite sides  
of said axis, said outlet passageways and apertures being non-circular and shaped  
20 to direct air under greater than atmospheric pressure flowing through said second  
air passageway against opposite sides of a generally conical stream of liquid  
formed by air flowing through the first air passageway to reshape the generally  
conical stream of liquid into a wide elongate stream.
- 25 2. A spray gun according to claim 1 wherein said outlet passageways and  
apertures in said horns have a greater width in a direction at a right angle to said  
axis than depth in a direction parallel to said axis.
- 30 3. A spray gun according to claim 2 wherein said outlet passageways and  
apertures in said horns are generally rectangular.

4. A spray gun according to claim 1 wherein said outlet passageways and apertures comprise first and second pairs of opposed outlet passageways and apertures in said horns, said first pair of outlet passageways each having a width in a direction at a right angle to said axis of about 0.154 inch or 0.39 cm, a depth in a direction parallel to said axis of about 0.35 inch or 0.89 cm, and the first pair of outlet apertures being spaced about 0.25 inch or 0.64 cm from the outlet end of the nozzle portion, and said second pair of outlet passageways each having a width in a direction at a right angle to said axis of about 0.165 inch or 0.42 cm, a depth in a direction parallel to said axis of about 0.05 inch or 0.13 cm, and the second pair of outlet apertures being spaced about 0.35 inch or 0.89 cm from the outlet end of the nozzle portion.

5. A spray gun according to claim 1 wherein said outlet end of said first air passageway is shaped to direct air exiting said first air passageway in a converging 10 conical pattern against liquid exiting the outlet end of said liquid passageway .

6. A liquid spray gun according to claim 1 wherein said body assembly includes a molded polymeric air cap portion having said horns, said outlet passageways and apertures being formed by said molding, and means mounting 20 said molded polymeric air cap portion on said nozzle portion, said molded air cap portion and nozzle portion having surfaces forming said first and second air passageways.

7. A liquid spray gun according to claim 6 wherein said means mounting 25 said air cap portion on said nozzle portion allows rotation of said air cap portion about said axis relative to said nozzle portion, said air cap and nozzle portions include stops limiting relative rotation of said air cap and nozzle portions to rotation through a predetermined angle between first and second relative positions, and said means mounting said air cap portion on said nozzle portion include 30 surfaces in frictional engagement to restrict relative rotation of said air cap and nozzle portions until a predetermined torque is manually applied between said air cap and nozzle portions.

8. A liquid spray gun according to claim 7 wherein said predetermined angle is about 90 degrees.

5        9. A liquid spray gun according to claim 1 further including a platform portion having through air distribution passageways including an inlet opening adapted to be connected to a supply of air under greater than atmospheric pressure, first and second air outlet openings, means for separately regulating the flow of air through said first and second air outlet openings of said air distribution passageways when air is flowing through said air distribution passageways, and manually operated means for stopping or allowing flow of air through said outlet openings of said air distribution passageways,

10        said platform portion and said nozzle portion having manually operable means for releasably mounting said nozzle portion on said reusable platform portion with said first and second air outlet openings of said air distribution passageways communicating with the inlet ends of said first and second passageways.

15        10. A liquid spray gun according to claim 9 wherein said manually operable means for releasably mounting said nozzle portion on said platform portion comprises said platform portion including a support wall having opposite inner and outer surfaces, an opening through said support wall between said inner and outer surfaces, and said nozzle portion including a projection from a contact surface on the side of said nozzle portion opposite said outlet end, said projection being received in said opening through said support wall with said contact surface against said outer surface and a distal part of said projection projecting past the outer surface of said support wall, said distal part of said projection having a transverse groove, and said manually operable means further including a latch member releasably engaged in said transverse groove adapted for manual removal from said distal part.

20        11. A liquid spray gun according to claim 9 wherein said body assembly is molded of polymeric material, and said platform portion is made of metal.